LAN PROFESSIONAL

RAS106/108 KVM SWITCH

RAS106 & RAS108

User's Guide

ΣDiMAX

COPYRIGHT & TRADEMARKS

FCC INFORMATION

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may be caused undesired operation.

LIMITED ONE-YEAR WARRANTY

Edimax warrants *RAS106/108* KVM Switch (cable is not included) is free from physical defects in material and workmanship under the normal use. If the product is found to be defective during the warranty period, then, as your sole remedy and as the manufacturer's only obligation, Edimax will repair or replace the product.

Edimax makes no other warranty or representation, expressed, implied or otherwise, regarding the *RAS106/108* KVM Switch, and specifically disclaims any warranty for merchantability, quality, performance or fitness for any particular purpose. In no event shall Edimax's liability exceed the price paid for the product from direct, indirect, special, incidental, or consequential damage resulting from the use of the product, its accompanying accessories, or its documentation.

PRODUCT UPDATE

Edimax reserves the rights to revise or update its products, accessories and documentation without obligation to notify any individual or entity. For any update information, please contact Edimax Customer Support.

CONTENTS

CHAPTER 1   INTRODUCTION

General Information

Congratulations on your purchase of Edimax's 6-/8-port Rackmount KVM Switch - *RAS106 & RAS1088. RAS106/108* are electronic keyboard/video/mouse (KVM) Switches that controls up to 6 or 8 PCs using a single keyboard, monitor, and mouse.

RAS106/108 KVM Switches can save you money by eliminating redundant peripherals (e.g. keyboard, monitor, and mouse) and provide a centralized control of multiple PCs. With a small investment in Edimax's *RAS106/108* KVM Switches you can preserve precious office space, cut energy cost and redundant peripheral cost, and increase productivity.

RAS106/108 KVM Switches feature standard 19" rackmount size that fits into any industrial rack, PC99 compliant color-coded connectors for easy correct cable connection, individual intelligent mouse and keyboard emulation to ensure successful PC boot up and flawless operation. Cap Lock, Num Lock, and Scroll Lock status are recorded and restored while switching among PCs. User can select PC by using keyboard Hot Keys, front-panel select buttons or let the *RAS106/108* KVM Switches do the automatic scan.

Features

- Easy Installation -- A truly plug and play device. Complete installation within minutes with Edimax's standard cable kits.

- Smooth Control -- User can select any PC by keyboard Hot Keys or push button.

- Flawless Booting -- Individual keyboard and mouse emulation to every PC.

- Intelligent Keyboard Emulation -- Cap Lock, Num Lock, and Scroll Lock status are recorded and restored while switching among PCs.

- 19" Rack Mount size -- Fit in any standard industrial rack (mounting bracket included).

- MS Intellimouse Support -- Provide Microsoft PS/2 Intellimouse and other name brand PS/2 mice emulation to ensure proper wheel mouse function.

- Wide Video Bandwidth -- Support monitor resolution up to 1600 x 1280 (recommend maximum 70Hz when set at 1600 x 1280).

- Reset Button: Reset mouse and keyboard simulation without power down the PCs.

- Standard and color-coded connectors -- Use standard PS/2 and VGA cables; PC99-compliant color-coded connectors to ensure correct cable connection.
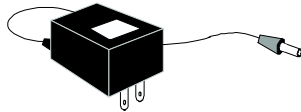
Package Contents

1 One 6-/8-port KVM Switch *(RAS106/108)*
2 One external power adapter
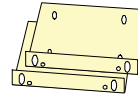3 One set of mounting brackets
4 One user's guide

Figure 1-1 Package Content
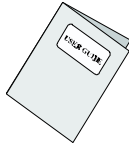
Specifications

Model	RAS106	RAS108
Number of PC Ports	6	8
PC Selection Method		
Push Button	Yes	Yes
Hot Keys	Yes	Yes
Automatic Scan	Yes	Yes
Maximum Resolution	1600x1280	1600x1280
Console Connectors		
Keyboard (PS/2)	1 Mini-DIN6/Female	1 Mini-DIN6/Female
Mouse (PS/2)	1 Mini-DIN6/Female	1 Mini-DIN6/Female
Monitor	1 HDB15/Female	1 HDB15/Female
PC Port Connectors		
Keyboard (PS/2)	6 Mini-DIN6/Female	8 Mini-DIN6/Female
Mouse (PS/2)	6 Mini-DIN6/Female	8 Mini-DIN6/Female
Monitor	6 HDB15/Male	8 HDB15/Male
READY LED	6	8
ACTIVE LED	6	8
SCAN LED	1	1
Scan Interval Time	10 Seconds	10 Seconds
Reset button	1	1
Maximum Cable Length		
to Console	30 feet (5 meters)	30 feet (5 meters)
to Computers	60 feet (20 meters)	60 feet (20 meters)
Power	9VDC 500mA	9VDC 500mA
Net Weight	4.0 lbs.(1.8 Kg)	5.5 lbs.(2.5 Kg)
Dimension	262x181x42 mm	370x248x42 mm
Operating Environment	$32\text{-}131^\circ$ F ($0\text{-}55^\circ$C) , 0%-90% RH	
Emission	FCC Class A	FCC Class B

Connectors and Cables

Console Connectors

Three different types of console connectors are built on the rear panel for connection to the keyboard, monitor, and mouse. Each connector is represented by a picture and color-coded.

: PS/2 Keyboard (6-pin mini DIN, female; in purple)
: VGA Monitor (HDB15, female; in blue)
: PS/2 Mouse (6-pin mini DIN, female; in green)

PC Port Connectors

Sixe (*RAS106*) or Eight (*RAS108*) groups of connectors are built on the real panel for connection to PCs using standard keyboard, monitor and mouse cables. Each connector is represented by a letter and color-coded.

K: PS/2 Keyboard (6-pin mini DIN, female; in purple)
V: VGA Monitor (HDB15, male; in blue)
M: PS/2 Mouse (6-pin mini DIN, female; in green)

Please refer to the "Specifications" in page 1-4 for details on *RAS106/RAS108's* PC port connectors.

Cable Kits

Optional PS/2 cable kits of different lengths are available for connection between *RAS106/108* and PCs.   Each cable kit consists of one keyboard cable, one mouse cable and one monitor cable. Refer to Appendix A page A-2 for detailed cable kit ordering information.

Front & Real Panel Description
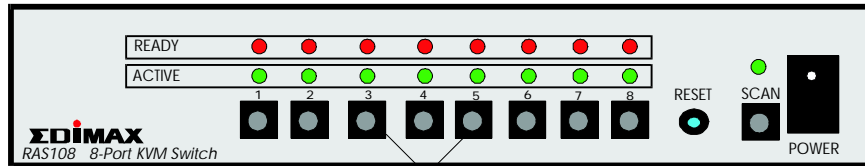
RAS108 Front Panel

Select Buttons

RAS108 Rear Panel

☞   RAS106's front and rear panel layout is similar as RAS108's.

CHAPTER 2 INSTALLATION

Operating Environment

RAS106/108 must be installed and operated within the
limits of specified operating temperature and humidity (see
previous section under Specifications). Do not place object
on top of the unit. Do not position the unit near any heating
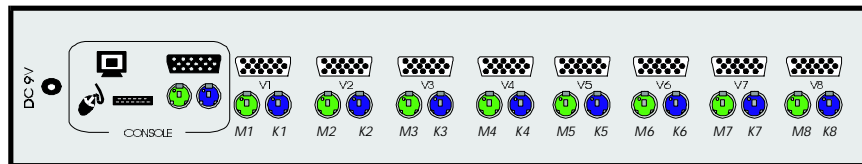source such as heater, radiator, or direct exposure to sun.
Prevent entering of water and moisture into the unit. If
necessary, use dehumidifier to reduce humidity.

Connecting The Peripherals

Keyboard -- Connect one PS/2 keyboard to console
keyboard connector (purple one) located on the rear panel
of the unit.

Mouse -- Connect one PS/2 mouse to the PS/2 console
mouse connector (green one) located on the real panel of
the unit.

☞   *Do not use any serial to PS/2 adapter to connect the mouse to the
     console mouse port.*

☞   *RAS106/108 support 2-button and 3-button mice, 4-button or other
     custom mice may not function properly or lose certain special
     funcion.*

Monitor -- Connect monitor to console monitor
connector (blue one) located on the rear panel of the unit.
Use only high resolution shielded monitor cable to ensure
quality video output.

Connecting The PCs

You may use any standard cables or use the cable kits
from Edimax to connect *RAS106/108* and the PCs.
Make sure the cable connectors match the following:

> PS/2 mouse cable: male to male, mini-DIN6
> PS/2 keyboard cable: male to male, mini-DIN6
> Monitor: male to female, HDB15

☞ *For monitor cables, Use only UL2919 compliant cable to
ensure the video signal quality.*

It is strongly recommended to use high quality cable
kits from Edimax to simplify the installation and
ensure good quality connections. Please refer to
"Connectors and Cables" in page 1-5 and "Product
Information" in Appendix A page A-2 for detailed
cable kit information.

Connect one end of each of the three cables
(keyboard, mouse and monitor cable) to the
RAS106/108's PC ports and the other end to the PC.
Make sure all the cables are firmly plugged-in and
secured. Follow the same procedures to connect all
PCs.

Connecting Power Adapter

First remove the AC power adapter from the package.
Read the input voltage specification from the power
adapter and make sure it matches with your local power
voltage.

Connect the AC power adapter to the unit. Plug the AC
power adapter to your power outlet. Turn power on
using the toggle switch on the front panel and the
power LED shall be lit.

☞   *CAUTION: Plugging the AC power adapter to a power outlet
with different voltage may cause personal injuries and damages
to the power adapter.*

CHAPTER 3 OPERATION

PC Selection Method

Three different PC selection methods are supported by *RAS106/108.*

Keyboard Hot Keys -- Use pre-defined Hot Keys to directly select PC.

Select Button - Switch PC or activate automatic SCAN mode by using the select buttons on the front panel.

Automatic Scan - Automatically scan all connected and power-on PCs at a pre-set time interval.

☞   *CAUTION: Do not move the mouse or typing keyboard before the RAS106/108 completes the channel switching. Fail to do so may lock up your keyboard or mouse. See Chapter 5 "Trouble Shooting" for further detail.*

Keyboard Hot Keys

You can select a specific PC or activate the automatic scan mode using the keyboard Hot Keys. The keyboard Hot Keys provide an instant and convenient way to control all your PCs.

All the Hot Key functions start with two "Scroll Lock" key and followed with additional keys. A short beep sound can be heard when you press "Scroll Lock" key twice.

1. To select a PC directly:

Scroll Lock → *Scroll Lock* → *PC#* → *<ENTER>*

The "PC#" represents the PC number from 1 to 6 or 8. The built-in buzzer will beep once to confirm the switching. The *ACTIVE* LED will switch and identify which PC is currently under control.

2. To activate Automatic SCAN mode:

Scroll Lock → *Scroll Lock* → *<Space Bar>*

A long beep sound to confirm the activation. The *SCAN* will be lit to indicate the operation of SCAN mode.

3. To deactivate Automatic SCAN mode:

Press any key on the keyboard

A short beep sound to confirm the deactivation. The *SCAN* LED will be turned off to indicate the end of SCAN mode.

Select Push Button

1. To select a PC:

Push the *SELECT* button right below each PC number to select that PC. The built-in buzzer will beep once to confirm each PC switching. The *ACTIVE* LED will switch and identify which PC is currently under control.

2. To activate Automatic SCAN mode:

Push and immediately release the _SCAN_ button right
below the *SCAN* LED to activate SCAN mode.

The built-in buzzer will beep to confirm the activation.
The *SCAN* LED will be lit to indicate the operation of
SCAN mode.

3. To deactivate Automatic SCAN mode:

Press any PC _SELECT_ button or _SCAN_ button.

The built-in buzzer will beep once to confirm the
deactivation. The *SCAN* LED will be turned off to
indicate the end of SCAN mode.

Reset Button

Press the _Reset_ button will automatically reset the
RAS106/108 KVM Switches' keyboard and mouse
emulation processors. In normal operation, users do
not need to use the reset function. In case of losing
keyboard or mouse connection during operation, you
may press the Reset button to force the *RAS106/108* to
re-initiate the emulation and re-establish the
connection.

Do not move the mouse or typing the keyboard during
the reset process. The built-in buzzer will sound a long
beep to confirm the activation of reset. The reset
process will be complete within three (3) seconds.

CHAPTER 4   LEDS & BUZZER

LEDs

RAS106/108 LEDs are located in the front panel. Please refer to the section of "Front & Real Panel Description" under Chapter 1 "Introduction" for the detail location of each LED.

READY LED: When a PC is properly connected and the PC is powered on, the READY LED corresponding to that PC will be lit.

ACTIVE LED: Indicate the currently selected PC. Only one ACTIVE LED will be lit although more than one computers are connected.

SCAN LED: LED is lit when *RAS106/108* is operating at automatic SCAN mode.

BUZZER

RAS106/108 has a built-in buzzer provide audio confirmation of PC switch and activation/deactivation of SCAN mode.

CHAPTER 5   TROUBLE SHOOTING

1. No screen display after the PC is powered on or after PC switching

- Press the PC *SELECT* button to switch to a port with PC connected.
- Make sure the external power adapter is plugged into the power outlet and power switch is turned on.
- Make sure the mouse and keyboard cables are not mis-connected.
- Make sure the monitor is firmly plugged into the console connector.
- Make sure the cables are firmly plugged into the PC port connectors.
- Try different video resolution by adjusting the setting of the display controller card from the Windows control panel.

2. Lose mouse control

- Do not move the mouse during the switching. *RAS106/108* can not switch the mouse control when it is still receiving the mouse signals.
- Make sure the unit is not in SCAN mode.
- Make sure the mouse is firmly plugged into the console connector.
- Make sure the cable is firmly plugged into the PC port connector and the PC.
- Try disabling touchpad if you are using a notebook computer.
- Restart your Windows 95, 98, NT, or 2000.
- Press Reset button.

3. Lose keyboard control

- Do not type any key on the keyboard before the channel is completely switched to new PC as indicated by the change of display screen.
- Make sure the keyboard is firmly plugged into the console connector.
- Make sure all the cables are firmly plugged into the PC port connectors.
- Try to switch to another channel and switch back.
- Press Reset button.

4. Wheel mouse does not function properly

- Make sure wheel mouse driver is installed on every PC.
- *RAS106/108* supports only 2-button and 3-button mouse such as Microsoft Intellimouse, Logitech FirstMouse+ and MouseMan. Try different brand wheel mouse.
- Press Reset button.

5. Mouse and keyboard do not respond instantly after PC switching

- Do not move the mouse or typing keyboard before *RAS106/108* completes the PC switching. If *RAS106/108* detects mouse or keyboard signals input from current PC before the switching is complete, it will delay the PC switching until there's no more signal input.

    In such case, you will feel slight delay in the response of mouse pointer or keyboard. Stop moving the mouse or typing the keyboard, and *RAS106/108* will complete the switching immediately.

6. Unable to switch PC

- If you are using Hot Keys, make sure "Scroll Lock" key is pressed twice, and you hear the confirmation beep and followed by a valid digit number and "Enter" key.
- If you are using push button, make sure push the center of the button to accurately initiate the switching.
- Do not move the mouse or typing keyboard before *RAS106/108* completes the switching. *RAS106/108* will not switch to selected PC until no more mouse or keyboard signals are detected.

APPENDIX A   PRODUCT INFORMATION

Product Information

In addition to *RAS106/108* KVM Switches, Edimax
offers a varities of KVM Switches. Following is a list of
different models and accessories. Check our web site
http://www.edimax.com for most up-to-date product
information.

I. *Genie* KVM Switch Series

MG2: 2-port PS/2 Mini KVM Switch w/cables
GENIE2-AP: 2-port KVM Switch AT & PS/2
GENIE4-P: 4-port KVM Switch PS/2
RAS106: 6-port KVM Switch PS/2, rackmount
RAS108: 8-port KVM Switch PS/2, rackmount

II. Cable Kits for *Genie* KVM Switches and CPU Switch Series

CS-AT-6: 6-feet AT cable kit
CS-AT-10: 10-feet AT cable kit
CS-AT-25: 25-feet AT cable kit
CS-AT-50: 50-feet AT cable kit
CS-PS2-6: 6-feet PS/2 cable kit
CS-PS2-10: 10-feet PS/2 cable kit
CS-PS2-25: 25-feet PS/2 cable kit
CS-PS2-50: 50-feet PS/2 cable kit

PS/2 type cable kit:

- Keyboard - 6-pin Mini-DIN, male-to-male
- Mouse - 6-pin Mini-DIN, male-to-male
- Monitor - HDB15, male-to-female

AT type cable kit:

- Keyboard - 5-pin DIN, male-to-male
- Mouse - DB9, female-to-male
- Monitor - HDB15, male-to-female

Customer Support

To contact Edimax customer support

Web	http://www.edimax.com
FTP	ftp.edimax.com
Telephone	(408) 988-6092
Fax	(408) 980-1530
eMail	support@edimax.com

Customer Support Hours

9:00AM to 5:00PM, Monday through Friday, USA Pacific Time.